TOOLS FOR TUNING UP

The CLEVELAND TWIST DRILL COMPANY
1242 EAST 49TH STREET
CLEVELAND

TRADE MARK REG. U. S. PAT. OFF. AND FOREIGN COUNTRIES

30 READE ST. NEW YORK 9 NORTH JEFFERSON ST. CHICAGO 654 HOWARD ST. SAN FRANCISCO
6515 SECOND BLVD., DETROIT LONDON - 35-36-37 UPPER THAMES ST., E.C.4

TOOLS FOR TUNING UP

The tools used in a repair shop or garage will usually show the ability of their owner . . . To the Garage Man or Repair Shop Mechanic there comes with each job a demand for speedy and accurate work . . . This makes it necessary to have modern tools of extreme accuracy—the right tools for each particular job . . . "Cleveland" tools will greatly assist you in turning out accurate work in the shortest possible time.

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The prices quoted in the following pages are necessarily "List." On many of the items there are trade discounts, for which kindly apply to your regular sources of supply.

TOOLS FOR TUNING UP

Home and Farm Drill Set No. 26

This compact, handy set consists of 8 Carbon Steel Straight Shank Drills, sizes 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4" and 9/32"—all carefully selected to meet the widest range of needs in the private home, on the farm, for radio repairs and minor automobile work. The drills will fit any standard hand, breast, post, or bench drill.

The set is packed in a wooden cylinder, as shown, with a handsome three-color varnished label, and equipped with a nickeled cap which revolves so that the size drill wanted can be easily and quickly found.

Price, per Set, Complete, $1.90

Mechanic's Drill Set No. 57

This set of **Cle-Forge** High Speed Drills consists of 8 sizes—1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4" and 9/32".

It has been created to meet an insistent demand for a set of small high speed drills for use in the smaller sizes of electric drills by automobile repair shops, small machine shops, farms, vocational schools, and the thousands of individual owners of portable electric drills.

Labeled in red, green and black, and equipped with a nickeled revolving cap making it easy to locate any size drill instantly, this is unquestionably the most convenient small high speed drill set ever produced.

Price, per Set, Complete, $3.55

S. S. Drill Sets in Metal Cases

Fraction Sizes

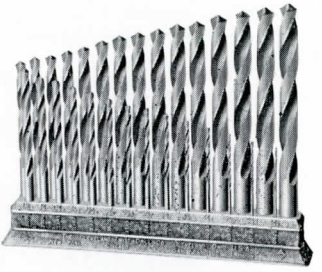
Carbon Steel Set No. 51

This set includes all sizes of Jobbers' straight shank drills from 1/16-inch to 1/2-inch, by 64ths. Each drill fits into a hole plainly marked with its size, and on the side of the stand is shown the decimal equivalent of each size drill.

Price Complete.....$17.85

At right is shown chromium plated stand included with both Sets Nos. 51 and 58. It is 8¼ inches long, 1¼ inches wide and 1⅛ inches high.

The metal cases shown above and below measure 8½ inches long, 7⅜ inches wide and 1½ inches high. Set No. 51 (above) is packed in a heavy black japanned case. Set No. 58 (below) is identical in size, but is lacquered in red.



High Speed Steel Set No. 58

Identical in all respects with Set No. 51, excepting that all drills are the famous Cle-Forge High Speed. The card shown in the inside cover of the metal case gives useful information on drill pointing, as well as the proper care of high speed drills.

Price Complete....$29.20

S. S. Drill Sets in Metal Cases

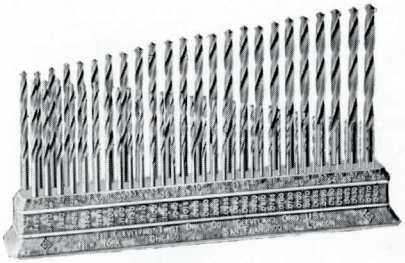
Wire Gauge Sizes

Carbon Steel Set No. 52

This set includes all the sizes of straight shank drills, steel wire gauge sizes, from No. 1 to No. 60, inclusive. The size drill fitting each hole is plainly marked, and on the side of the stand is shown the decimal equivalent of each size drill.

Price Complete.....$16.20

Below is shown chromium plated stand included with both sets Nos. 52 and 59. It is the same size as stand shown on opposite page.



The metal cases shown above and below measure 8½ inches long, 5⅛ inches wide and 1½ inches high. Set No. 52 (above) is packed in a heavy black japanned case. Set No. 59 (below) is identical in size, but is lacquered in red.

High Speed Steel Set No. 59

Identical in every respect with Set No. 52, excepting that all drills are the famous Cle-Forge High Speed. The card shown in the inside cover of the metal case gives useful information on drill pointing, as well as the proper care of high speed drills.

Price Complete.....$23.30

Separate Stands..$5.00
Separate Cases....$2.50

TOOLS FOR TUNING UP

Straight Shank Drills in Sets

Carbon Steel No. 50
With Stand, $16.00

High Speed Steel No. 54
Without Stand, $24.75

This set, now furnished in either carbon or high speed steel, takes in all the sizes of Jobbers' Straight shank drills, from 1/16 inch to 1/2 inch, inclusive, by 64ths. Each drill fits in a hole corresponding to its size. All 32nd sizes are on one side, and 64ths on the other side, thus affording quick and accurate selection.

Straight Shank Wire Gauge Drill Set

This set comprises all the sizes of straight shank drills, steel wire gauge, from No. 1 to 60, inclusive. Each hole is numbered to correspond to size of drill. The even numbers are on one side, odd on the other, thus making selection very convenient.

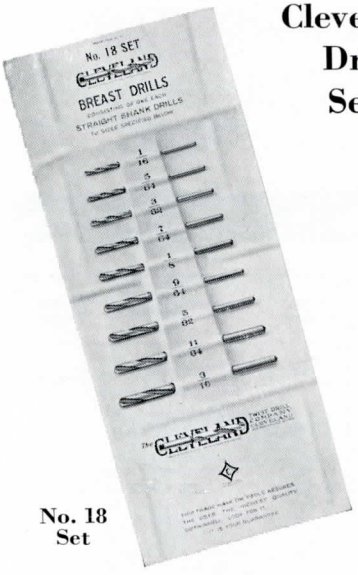
These stands are of a peculiar composition metal, admirably adapted for the purpose and will not rust. The finish is in oxidized copper, making a very beautiful and lasting effect. They are especially useful in tool rooms and on mechanics' benches.

Stand Only, $3.50

Carbon Steel No. 80
With Stand, $14.35

High Speed Steel No. 84
Without Stand, $18.85

Cleveland Drill Sets



No. 18 Set

This set has been on the market for a number of years. It is more popular today then ever before. Set contains the following most used sizes: 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16".

Drills are inserted, as shown, through especially punched holes in a heavy, tough, non-tearing fibre cloth, and are rolled into a snug, flat package which fits into a vest pocket size envelope of the same material.

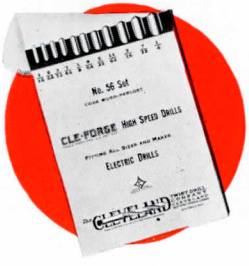
Price, Complete, $1.60

No. 22 Set

No. 22 is a recent addition to the "Cleveland" Line of small drill sets. The addition of the two larger sizes of drills make the No. 22 Set most complete, and opens up a much wider range of uses. This set appeals to automobile owners who "do their own tinkering," garage mechanics, machinists—and in fact, everyone who uses small drills for a thousand and one purposes.

Set contains the following sizes: 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 7/32", 1/4".

Price, Complete, $2.10



Cle-Forge High Speed Drill Set No. 56

For the shop, or individual, desiring the finest to be had in small drills, we recommend Set No. 56.

Manufactured by the world-known "CLE-FORGE" process, these drills combine the essential qualities of *accuracy* and *toughness*.

There are 11 drills in the set, of exactly the same sizes as in Set No. 22. They are packed in a wooden block, which is inserted into a tough, fibre cloth container, with the size of each drill properly indicated. **Price, Complete, $3.85**

TOOLS FOR TUNING UP

CLE-FORGE HIGH SPEED DRILLS

TRADE MARK REG. U.S. PAT. OFF.

Taper Shank

List No. 940

Diam. Inches	Price Each	Length Overall Inches	Shank Taper	Diam. Inches	Price Each	Length Overall Inches	Shank Taper
1/8	$1.00	5 1/8		31/32	9.65	11	
5/32	1.10	5 3/8		1"	10.25	11	No. 3
3/16	1.25	5 3/4					
7/32	1.35	6		1 1/32	12.00	12 1/8	
1/4	1.40	6 1/8	No. 1	1 1/16	12.80	12 1/4	
9/32	1.50	6 1/4		1 3/32	13.25	12 1/2	
5/16	1.60	6 3/8		1 1/8	14.25	12 3/4	
11/32	1.70	6 1/2		1 5/32	15.00	12 7/8	
				1 3/16	15.75	13	
3/8	2.10	7 3/8		1 7/32	16.50	13 1/8	
13/32	2.25	7 1/2		1 1/4	18.00	13 1/2	No. 4
7/16	2.45	7 3/4		1 9/32	20.00	14 1/8	
15/32	2.65	8		1 5/16	20.75	14 1/4	
1/2	2.95	8 1/4	No. 2	1 11/32	21.50	14 3/8	
17/32	3.25	8 1/2		1 3/8	22.25	14 1/2	
9/16	3.75	8 3/4		1 13/32	23.00	14 5/8	
19/32	4.00	8 3/4		1 7/16	23.75	14 3/4	
5/8	4.25	8 3/4		1 15/32	24.50	14 7/8	
				1 1/2	25.25	15	
21/32	5.15	9 3/4					
11/16	5.70	10		1 17/32	28.75	16 3/8	
23/32	6.20	10 1/4		1 9/16	30.75	16 5/8	
3/4	6.75	10 1/2		1 19/32	32.75	16 7/8	
25/32	7.00	10 5/8		1 5/8	34.00	17	
13/16	7.25	10 3/4	No. 3	1 21/32	35.25	17 1/8	No. 5
27/32	7.65	10 3/4		1 11/16	36.50	17 1/8	
7/8	8.05	10 3/4		1 23/32	37.75	17 1/8	
29/32	8.45	10 3/4		1 3/4	39.00	17 1/8	
15/16	8.85	10 3/4		1 25/32	40.25	17 1/8	

64th sizes take price of next larger size.

These drills may be had also in sizes from 1 13/16" to 2 1/4" by 32ds; from 2 5/16" to 3 1/2" by 16ths. Prices upon application.

These Drills, List No. 940, can be furnished with Shank Taper No. 1 up to 15/32"; with Shank Taper No. 2 up to 25/32"; with Shank Taper No. 3 up to 1-1/16"---at slightly lower prices.

Taper Shank Drills

Carbon Steel

List No. 106

Diameter Inches	Price Each	Length Overall Inches	Shank Taper	Diameter Inches	Price Each	Length Overall Inches	Shank Taper
1/8	$0.45	5 1/8		15/16	$ 3.00	10 3/4	
5/32	.45	5 3/8		31/32	3.25	11	
3/16	.50	5 3/4		1	3.50	11	
7/32	.55	6		1 1/32	3.75	11 1/8	
1/4	.60	6 1/8		1 1/16	4.00	11 1/4	
9/32	.65	6 1/4		1 3/32	4.25	11 1/2	No. 3
5/16	.70	6 3/8		1 1/8	4.50	11 3/4	
11/32	.75	6 1/2	No. 1	1 5/32	4.75	11 7/8	
3/8	.80	6 3/4		1 3/16	5.00	12	
13/32	.90	7		1 7/32	5.25	12 1/8	
7/16	1.00	7 1/4		1 1/4	5.50	12 1/2	
15/32	1.10	7 1/2					
1/2	1.20	7 3/4					
17/32	1.30	8		1 9/32	5.75	14 1/8	
9/16	1.40	8 1/4		1 5/16	6.00	14 1/4	
				1 11/32	6.25	14 3/8	
				1 3/8	6.50	14 1/2	
				1 13/32	7.00	14 5/8	
				1 7/16	7.50	14 3/4	
19/32	1.50	8 3/4		1 15/32	8.00	14 7/8	
5/8	1.60	8 3/4		1 1/2	8.50	15	
21/32	1.70	9		1 17/32	9.00	15	No. 4
11/16	1.80	9 1/4		1 9/16	9.50	15 1/4	
23/32	1.90	9 1/2		1 19/32	10.00	15 1/2	
3/4	2.00	9 3/4	No. 2	1 5/8	10.50	15 5/8	
25/32	2.10	9 7/8		1 21/32	11.00	15 3/4	
13/16	2.20	10		1 11/16	11.50	15 3/4	
27/32	2.40	10		1 23/32	12.00	15 3/4	
7/8	2.60	10		1 3/4	12.50	16 1/4	
29/32	2.80	10		1 25/32	13.25	16 1/4	

64th sizes take price of next larger size.

These drills may be had also in sizes from 1 13/16" to 2 1/4" by 32ds; from 2 5/16" to 3 1/2" by 16ths. Prices upon application.

TOOLS FOR TUNING UP

Straight Shank Drills, Short Set

Carbon Steel List No. 108

CLE-FORGE HIGH SPEED DRILLS

TRADE MARK REG. U. S. PAT. OFF.

List No. 917

Diameter Inches	Price per Doz.		Length Overall Inches	Diameter Inches	Price per Doz.		Length Overall Inches
	Carbon Steel	High Speed			Carbon Steel	High Speed	
1/64	$1.50	$4.25	7/8	17/64	$3.50	$7.50	4 1/2
1/32	1.50	3.50	1 1/2	9/32	3.80	8.25	4 1/4
3/64	1.55	2.40	1 3/4	19/64	4.00	9.00	4 3/8
1/16	1.60	3.00	2 1/2	5/16	4.35	9.75	4 1/2
5/64	1.65	3.10	2 5/8	21/64	4.70	10.75	4 5/8
3/32	1.70	3.20	2 3/4	11/32	5.05	11.75	4 3/4
7/64	1.75	3.40	2 7/8	23/64	5.50	12.75	4 7/8
1/8	1.80	3.60	3	3/8	6.00	13.75	5
9/64	1.85	3.90	3 1/8	25/64	6.50	15.00	5 1/8
5/32	1.90	4.20	3 1/4	13/32	7.00	16.25	5 1/4
11/64	2.00	4.50	3 3/8	27/64	7.75	17.50	5 3/8
3/16	2.25	4.85	3 1/2	7/16	8.50	18.75	5 1/2
13/64	2.50	5.25	3 5/8	29/64	9.25	20.00	5 5/8
7/32	2.75	5.75	3 3/4	15/32	10.00	21.25	5 3/4
15/64	3.00	6.25	3 7/8	31/64	11.00	22.75	5 7/8
1/4	3.25	6.75	4	1/2	12.00	24.25	6

Carbon drills for use in brass are carried in stock and take above list prices of No. 108. When ordering specify List No. 1208 "for brass."

Repairman's Taper Reamers

List No. 142

Size No.	Price Each	Diameter		Length	
		Large End	At Point	Flute	Overall
1	$1.00	1/2	1/8	3 1/2	5 1/2
2	1.50	1	3/8	4 1/2	6 1/2

This is an ideal reamer for practically every type of reaming job where quick work is required. Farmers and others with home workshops find this reamer useful, because it eliminates the necessity and expense of several different sizes. It is also extensively used by electricians, telephone linemen, auto repairmen, plumbers, carpenters, machinists, blacksmiths, and others, for increasing the size of holes in all materials.

Straight Shank Drills, Wire Gauge

Carbon Steel List No. 108A

CLE-FORGE HIGH SPEED DRILLS

TRADE MARK REG. U.S. PAT. OFF.

List No. 918

Wire Gauge No.	Price Per Dozen		Decimal Diameter Inches	Length Overall Inches	Wire Gauge No.	Price Per Dozen		Decimal Diameter Inches	Length Overall Inches
	Carbon Steel	High Speed				Carbon Steel	High Speed		
1	$2.75	$6.45	.2280	4	31	$1.75	$3.30	.1200	2 3/4
2	2.75	6.45	.2210	3 15/16	32	1.75	3.30	.1160	2 11/16
3	2.75	6.15	.2130	3 15/16	33	1.75	3.30	.1130	2 11/16
4	2.75	5.95	.2090	3 7/8	34	1.75	3.15	.1110	2 5/8
5	2.75	5.95	.2055	3 13/16	35	1.75	3.15	.1100	2 9/16
6	2.50	5.95	.2040	3 13/16	36	1.75	3.10	.1065	2 9/16
7	2.50	5.45	.2010	3 3/4	37	1.75	2.95	.1040	2 1/2
8	2.50	5.45	.1990	3 11/16	38	1.75	2.95	.1015	2 7/16
9	2.50	5.45	.1960	3 11/16	39	1.75	2.95	.0995	2 7/16
10	2.50	5.25	.1935	3 5/8	40	1.75	2.80	.0980	2 3/8
11	2.25	5.25	.1910	3 9/16	41	1.70	2.80	.0960	2 5/16
12	2.25	5.25	.1890	3 9/16	42	1.70	2.75	.0935	2 5/16
13	2.25	4.85	.1850	3 1/2	43	1.70	2.60	.0890	2 1/4
14	2.25	4.85	.1820	3 7/16	44	1.70	2.60	.0860	2 3/16
15	2.25	4.85	.1800	3 7/16	45	1.70	2.60	.0820	2 3/16
16	2.00	4.65	.1770	3 3/8	46	1.65	2.50	.0810	2 1/8
17	2.00	4.65	.1730	3 5/16	47	1.65	2.50	.0785	2 1/16
18	2.00	4.50	.1695	3 5/16	48	1.65	2.50	.0760	2 1/16
19	2.00	4.35	.1660	3 1/4	49	1.65	2.50	.0730	2
20	2.00	4.35	.1610	3 3/16	50	1.65	2.40	.0700	1 15/16
21	1.90	4.35	.1590	3 3/16	51	1.60	2.40	.0670	1 15/16
22	1.90	4.15	.1570	3 1/8	52	1.60	2.40	.0635	1 7/8
23	1.90	4.05	.1540	3 1/16	53	1.60	2.40	.0595	1 13/16
24	1.90	4.05	.1520	3 1/16	54	1.60	2.40	.0550	1 13/16
25	1.90	3.90	.1495	3	55	1.60	2.40	.0520	1 3/4
26	1.80	3.90	.1470	2 15/16	56	1.55	2.40	.0465	1 11/16
27	1.80	3.90	.1440	2 15/16	57	1.55	2.40	.0430	1 11/16
28	1.80	3.60	.1405	2 7/8	58	1.55	2.40	.0420	1 5/8
29	1.80	3.60	.1360	2 13/16	59	1.55	2.40	.0410	1 9/16
30	1.80	3.60	.1285	2 13/16	60	1.55	2.40	.0400	1 9/16

Carbon drills for use in brass are carried in stock and take above list prices of No. 108A.

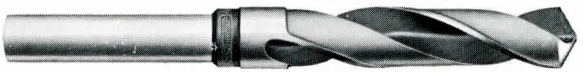
When ordering specify List No. 1207 "for brass."

Drills for Blacksmith's Drill Presses

Carbon Steel List No. 120

CLE-FORGE HIGH SPEED DRILLS
TRADE MARK REG. U.S. PAT. OFF.

List No. 936



Shanks ½ inch diameter and 2¼ inches long

Diameter Inches	Price Each		Length Overall Inches	Diameter Inches	Price Each		Length Overall Inches
	Carbon Steel	High Speed			Carbon Steel	High Speed	
1/8	$ .45	$1.40	4 7/8	23/32	$1.60	$5.25	6
5/32	.45	1.50	5 1/8	3/4	1.70	5.50	6
3/16	.50	1.60	5 1/2	25/32	1.80	5.75	6
7/32	.55	1.75	5 3/4	13/16	1.90	6.00	6
1/4	.60	1.90	6	27/32	2.00	6.25	6
9/32	.65	2.05	6	7/8	2.10	6.50	6
5/16	.70	2.20	6	29/32	2.20	6.75	6
11/32	.75	2.35	6	15/16	2.30	7.25	6
3/8	.80	2.50	6	31/32	2.40	7.75	6
13/32	.85	2.75	6	1	2.50	8.50	6
7/16	.90	3.00	6	1 1/32	2.60	.....	6
15/32	.95	3.25	6	1 1/16	2.70	.....	6
1/2	1.00	3.50	6	1 1/8	2.90	.....	6
17/32	1.05	3.75	6	1 3/16	3.10	.....	6
9/16	1.10	4.00	6	1 1/4	3.30	.....	6
19/32	1.20	4.25	6	1 5/16	3.60	.....	6
5/8	1.30	4.50	6	1 3/8	3.90	.....	6
21/32	1.40	4.75	6	1 7/16	4.20	.....	6
11/16	1.50	5.00	6	1 1/2	4.50	.....	6

High Speed Drills with ½-inch shanks will be furnished in sizes over ¾-inch diameter only at customer's risk, as we do not consider the shanks strong enough.

List No. 120 only is regularly furnished with flatted shank. It will be furnished with round shanks only when so ordered. List No. 936 has round shanks in all sizes.

For use in portable electric drills, we recommend that in all sizes up to and including ½-inch Straight Shank High Speed Drill No. 917 be used. (See page No. 12.)

TOOLS FOR TUNING UP

Bit Stock Drills for Metal or Wood

List No. 114

Diam. Inches	Price Per Dozen	Length Overall Inches	Diam. Inches	Price Per Dozen	Length Overall Inches
1/16	$ 2.50	3 3/8	5/8	$18.00	7 1/2
3/32	2.70	3 5/8	21/32	19.50	7 1/2
1/8	3.00	3 7/8	11/16	21.00	7 1/2
5/32	3.50	4 1/8	23/32	22.50	7 1/2
3/16	4.00	4 3/8	3/4	24.00	7 1/2
7/32	4.50	4 5/8	25/32	25.50	7 1/2
1/4	5.00	5 1/8	13/16	27.00	7 1/2
9/32	6.00	5 1/4	27/32	28.50	7 1/2
5/16	7.00	5 1/2	7/8	30.00	7 1/2
11/32	8.00	5 3/4	29/32	31.50	7 1/2
3/8	8.50	5 7/8	15/16	33.00	7 1/2
13/32	9.25	6	31/32	34.50	7 1/2
7/16	10.50	6 1/4	1	36.00	7 1/2
15/32	11.75	6 5/8	1 1/16	39.00	7 1/2
1/2	13.00	6 3/4	1 1/8	42.00	7 1/2
17/32	14.25	7 1/2	1 3/16	45.00	7 1/2
9/16	15.50	7 1/2	1 1/4	48.00	7 1/2
19/32	16.75	7 1/2			

Bit Stock Drill Set

List No. 14B

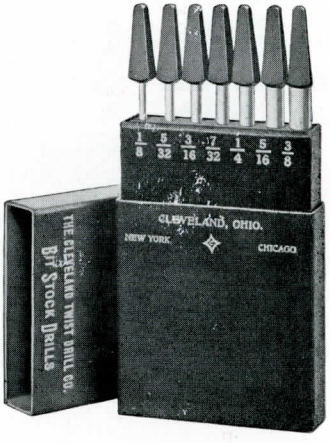
This set consists of the following sizes Bit Stock Drills:

1/8, 5/32, 3/16, 7/32, 1/4, 3/8 inch.

The flat case which goes with this set is covered with a strong leatherette, green in color, gold embossed.

Size, 7 x 3 1/2 x 3/4 inches.

Price, Complete, $4.35



TOOLS FOR TUNING UP

Drills and Countersinks Combined

Carbon Steel List No. 98

High Speed Steel List No. 998

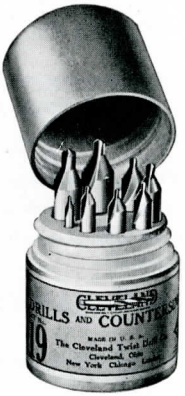
The included angle of the Countersink is 60°. The drills at both ends are of the same diameter. Special sizes or angles made to order.

Size No.	Price per Dozen		Diam. of Body Inches	Diam. of Drills Inches	Length Overall Inches
	Carbon Steel	High Speed			
A-1	$2.50	$8.00	1/8	3/64	1 1/4
C-2	3.00	8.00	13/64	1/16	1 7/8
D-1	3.25	8.00	15/64	5/64	2
E-1	3.50	8.00	.300	3/32	2 1/8
E-2	3.50	8.00	.300	1/8	2 1/8
F-1	4.50	12.00	7/16	5/32	2 3/4
F-2	4.50	12.00	7/16	3/16	2 3/4
J-1	5.75	18.00	1/2	7/32	3
J-2	5.75	18.00	1/2	9/32	3
M-1	9.00	24.00	5/8	7/32	3 1/4
M-2	9.00	24.00	5/8	9/32	3 1/4
N-1	11.75	32.00	3/4	1/4	3 1/2
N-2	11.75	32.00	3/4	5/16	3 1/2

Drills and Countersinks Combined

Carbon Steel No. 19 Set — High Speed Steel No. 49 Set

Set No. 19 is composed of Drills and Countersinks List No. 98. Sizes A1, C2, D1, E1, E2, F1, F2. This range of sizes will be found ample to cover the center hole requirements of almost every shop. The set is packed in a neat wooden box with an individual hole for each tool to avoid misplacement and to permit quick selection.



Price, Complete, No. 19 Set—
Carbon Steel..... $2.30

Price, Complete, No. 49 Set—
High Speed Steel..... $6.45

TOOLS FOR TUNING UP

Quick-Set
Adjustable Reamer
TRADE MARK REG. U.S. PAT. OFF

List No. 148

Quick-Set Adjustable Reamers are manufactured for garage and repair shop use. These shops require a reamer with wide limits of adjustment and sturdy construction.

The bodies of Quick-Set Adjustable Reamers are made of tough machinery steel. The two ends of the body are threaded for nuts and the reamer is adjusted by loosening one nut and tightening the other. This moves the blades in the six slots which are milled with tapered bottoms in the body of the reamer.

The six blades are of hardened carbon tool steel and are ground to close limits.

The blades of a Quick-Set Reamer may be replaced when, after long hard service, new blades are needed. It is not necessary to return the reamer to us. *You can replace the blades right in your own shop without grinding or fitting.* These blades are carried in stock for immediate shipment and ready for use.

These reamers can be furnished with high speed steel blades, if desired. Prices upon application.

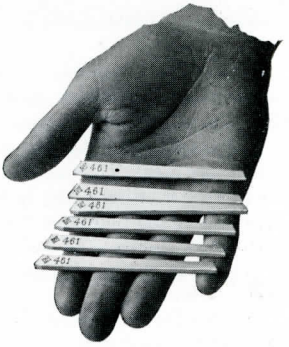
Size No.	Dimensions Inches	Dimensions m/m	Length Overall Inches	Price Each
4/A	3/8 to 13/32	9.5 to 10.25	4 3/4	$3.50
3/A	13/32 to 7/16	10.25 to 11.	5	4.00
2/A	7/16 to 15/32	11. to 12.	5 1/4	4.00
A	15/32 to 17/32	12. to 13.5	5 1/2	4.50
B	17/32 to 19/32	13.5 to 15.	5 3/4	4.50
C	19/32 to 21/32	15. to 16.75	6 1/2	4.75
D	21/32 to 23/32	16.75 to 18.25	6 3/4	4.75
E	23/32 to 25/32	18.25 to 19.75	7	5.00
F	25/32 to 27/32	19.75 to 21.5	7 3/8	5.00
G	27/32 to 15/16	21.5 to 23.75	8	5.50
H	15/16 to 1 1/16	23.75 to 27.	9	5.80
I	1 1/16 to 1 3/16	27. to 30.25	10	7.00
J	1 3/16 to 1 11/32	30.25 to 34.25	11	8.00
K	1 11/32 to 1 1/2	34.25 to 38.	12	10.00
L	1 1/2 to 1 13/16	38. to 46.	14	11.50
M	1 13/16 to 2 7/32	46. to 56.	16	15.00
N	2 7/32 to 2 3/4	56. to 70.	18	25.00
O	2 3/4 to 3 11/32	70. to 85.	20	35.00

As indicated, each reamer expands to the smallest size of the next larger reamer: thereby eliminating many odd sizes which would otherwise be necessary.

Quick-Set
Adjustable Reamer
TRADE MARK REG U.S PAT OFF

Extra Quick-Set Blades and Nuts

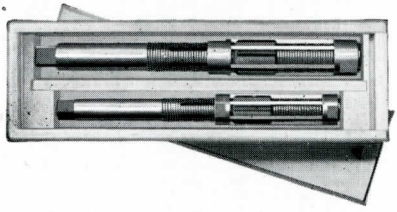
Blades to Fit Size	Length Cutting Edge Inches	List Price Blades per Set (6)	List Price Extra Nuts
4/A	1 1/2	$1.50	$0.25
3/A	1 1/2	1.80	.30
2/A	1 5/8	1.80	.30
A	1 5/8	1.80	.30
B	1 13/16	1.80	.30
C	2 1/16	1.80	.30
D	2 3/16	1.80	.30
E	2 1/2	2.10	.35
F	2 5/8	2.10	.35
G	3	2.40	.40
H	3 1/4	2.40	.40
I	3 3/8	2.70	.45
J	3 7/8	2.70	.45
K	4 1/4	3.30	.50
L	4 7/16	3.30	.60
M	5	3.90	.70
N	4 13/16	5.40	.90
O	5 3/16	7.20	1.20



These blades come ground to size and ready to insert. It pays to keep extra sets on hand. In ordering blades, be sure to specify letter size stamped in shank of Reamer.

No. 47 Set

Set No. 47 consists of two large sizes of Quick-Set Reamers—L and M—with an expansion range from 1½″ to 2 7/32″. Sets Nos. 44, 46 and 47, together, comprise the full line, with the exception of sizes N and O.



This Set comes in a strong polished case with slide cover and an individual compartment for each reamer.

Price, Complete, with Case, $26.50

TOOLS FOR TUNING UP

Quick-Set
Adjustable Reamer
TRADE MARK REG. U.S. PAT. OFF.

No. 44 Set

Set No. 44 is the ideal combination for garages and repair shops which require reamers in a great range of sizes.

This set comprises eleven Quick-Set Reamers sizes A to K, inclusive—a range which will handle reaming jobs from 15/32" to 1½". Particular attention is called to the great strength of the smaller sizes—thereby practically eliminating reamer breakage.

Set No. 44 comes packed in a handsomely polished case hinged cover with a receptacle for extra blades.

Price, Complete, with Case, $64.80

No. 45 Set

No. 45 is offered to meet an insistent demand for a small set to include the smaller sizes and provide a range best adapted to everyday garage and repair shop work. This Set comprises eight Quick-Set Reamers sizes A to H, inclusive.

These Reamers can be adjusted to ream any size hole from 15/32" to 1 1/16".

Set No. 45 comes in a strong polished case with slide cover and individual compartments for each reamer.

Price, Complete, with Case, $39.80

Quick-Set
Adjustable Reamer
TRADE MARK REG. U.S. PAT. OFF.

No. 42 Set

Set No. 42 is designed to take care of the every day garage needs and although it does not contain the small or very large reamers, it will take care of the majority of the reaming operations in the garage at a moderate cost.

This set comprises six Quick-Set Reamers sizes C to H, inclusive. These reamers may be adjusted to ream any size hole from $^{19}/_{32}$" to $1^{1}/_{16}$".

Set No. 42 comes in a polished case with slide cover and individual compartments for each reamer.

Price, Complete, with Case, $30.80

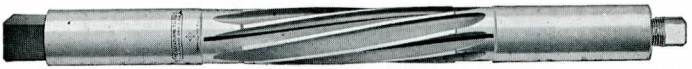
No. 46 Set

Set No. 46 is our newest set offered for the use of the mechanic who needs adjustable reamers for small holes. It is, also, an ideal set for the farm shop, as well as for the home tool chest. No. 46 consists of three Quick-Set Reamers, sizes 4/A, 3/A and 2/A. These reamers can be adjusted to ream any size hole from $^{3}/_{8}$" to $^{15}/_{32}$". The set is packed in a small, strong wooden case, with slide cover and individual compartments for each reamer.

Price, Complete, with Case, $11.50

Expansion Hand Reamers

Spiral Flute—List No. 126



Patent No. 1,570,049

Diameter Inches	Price Each	Length of Flute Inches	Length of Pilot Inches	Length Overall Inches
3/8	$ 5.60	1 7/8	1 1/2	6 1/8
13/32	5.80	1 27/32	1 1/2	6 1/8
7/16	5.80	1 7/8	1 1/2	6 3/16
15/32	6.00	1 7/8	1 1/2	6 7/32
1/2	6.00	1 13/16	1 1/2	6 7/16
17/32	6.20	1 15/16	1 1/2	6 5/8
9/16	6.40	2 1/16	1 1/2	6 25/32
19/32	6.70	2 3/16	1 1/2	7
.6093	6.70	2 5/16	2	7 31/32
5/8	7.00	2 5/16	2	7 31/32
21/32	7.30	2 1/2	2	8 5/32
.668	7.70	2 11/16	2	8 3/8
11/16	7.70	2 11/16	2	8 3/8
23/32	8.00	2 3/4	2	8 15/32
.734	8.40	2 13/16	2	8 17/32
.740	8.40	2 13/16	2	8 17/32
3/4	8.40	2 13/16	2	8 17/32
25/32	8.80	3	2	8 13/16
13/16	9.20	3 1/16	2	9
27/32	9.60	3 1/4	2	9 1/4
.850	10.00	3 3/8	2	9 3/8
.855	10.00	3 3/8	2	9 3/8
.860	10.00	3 3/8	2	9 3/8
.865	10.00	3 3/8	2	9 3/8
7/8	10.00	3 3/8	2	9 3/8
29/32	10.40	3 1/2	2	9 5/8
15/16	10.80	3 5/8	2	9 7/8
31/32	11.30	3 13/16	2	10 3/32
.990	11.80	3 7/8	2	10 1/4
1	11.80	3 7/8	2	10 1/4
1 1/32	12.20	4	2	10 1/2
1 1/16	12.60	4 1/16	2	10 11/16
1 3/32	13.10	4 1/8	2	10 13/16
1 1/8	13.60	4 1/8	2	10 7/8
1 5/32	14.10	4 3/16	2	11 1/32
1 3/16	14.60	4 3/16	2	11 1/8
1 7/32	15.60	4 1/4	2	11 9/32
1.225	15.60	4 1/4	2	11 3/8
1.234	15.60	4 1/4	2	11 3/8
1 1/4	15.60	4 1/4	2	11 3/8
1 9/32	16.60	4 3/8	2	11 1/2
1 5/16	16.60	4 7/16	2	11 9/16
1 11/32	18.00	4 1/2	2	11 11/16
1 3/8	18.00	4 7/16	2	11 3/4
1 13/32	20.00	4 1/2	2	11 7/8
1 7/16	20.00	4 7/16	2	11 15/16
1 15/32	22.00	4 1/2	2	12
1 1/2	22.00	4 1/2	2	12 1/16

TOOLS FOR TUNING UP

Expansion Hand Reamers

Spiral Flute—Set No. 36

This set has been made up after a careful check of the sizes mostly called for. In compartment at left are sizes .860, $\frac{7}{8}$", $\frac{15}{16}$", $\frac{31}{32}$" and 1". In the compartment at right are sizes $\frac{5}{8}$", .668, $\frac{11}{16}$", .740, $\frac{3}{4}$", $\frac{13}{16}$" and .850. 12 reamers packed in a handsome polished compartment case.

List Price, Complete, including Compartment Case, $120.00

Bit Stock Drill Set

List No. 13

This set consists of the following sizes Bit Stock Drills: $\frac{1}{16}$", $\frac{3}{32}$", $\frac{1}{8}$", $\frac{5}{32}$", $\frac{3}{16}$", $\frac{7}{32}$", $\frac{1}{4}$", $\frac{5}{16}$", $\frac{3}{8}$".

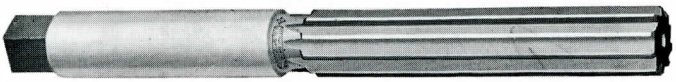
They are contained in a handsome hardwood box, $2\frac{1}{2}$ inches in diameter and $6\frac{1}{2}$ inches long.

Price, Complete, $4.25

Hand Reamers

Carbon Steel List No. 128A

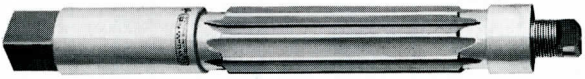
Eccentric Flutes



Where a number of duplicate reaming jobs are to be done there is no reamer better suited to the work within its range than the 128A. Being a solid reamer it is, of course, extremely accurate. This reamer is also furnished in sets and we would be glad to send you additional literature and prices on them.

Common Sense Expansion Reamers

List No. 129



A reamer that will help to reduce the number of reamers carried in your tool room. It can be easily and quickly adjusted and always gives satisfactory reaming results. The limits of expansion recommended for these reamers are as follows: Sizes ¼ to $^{15}/_{32}$″, .005″; ½ to $^{31}/_{32}$″, .008″; 1 to $1^{23}/_{32}$″, .010″; 1¾ to 2½″, .012″. We have also furnished these with extra long shanks at special prices.

TOOLS FOR TUNING UP

The following List Prices and Sizes apply to the Reamers illustrated on the preceding page

Diam-eter Inches	128-A Carbon	129 Carbon	Diam-eter Inches	128-A Carbon	129 Carbon
	PRICE EACH				
1/8	$1.00	..	31/32	$3.70	$ 6.75
5/32	1.20	.....	1	3.70	6.75
3/16	1.20	.....	1 1/32	4.00	7.25
7/32	1.40	.....	1 1/16	4.00	7.25
1/4	1.40	$3.00	1 3/32	4.30	7.75
9/32	1.50	3.10	1 1/8	4.30	7.75
5/16	1.50	3.10	1 5/32	4.60	8.30
11/32	1.60	3.20	1 3/16	4.60	8.30
3/8	1.60	3.20	1 7/32	4.90	8.90
13/32	1.75	3.30	1 1/4	4.90	8.90
7/16	1.75	3.30	1 9/32	5.20	9.50
15/32	1.90	3.40	1 5/16	5.20	9.50
1/2	1.90	3.40	1 11/32	5.60	10.50
17/32	2.00	3.65	1 3/8	5.60	10.50
9/16	2.00	3.65	1 13/32	6.00	11.50
19/32	2.20	4.00	1 7/16	6.00	11.50
5/8	2.20	4.00	1 15/32	6.40	12.50
21/32	2.40	4.40	1 1/2	6.40	12.50
11/16	2.40	4.40	1 9/16	6.80	13.00
23/32	2.60	4.80	1 5/8	7.20	13.50
3/4	2.60	4.80	1 11/16	7.60	14.00
25/32	2.80	5.25	1 3/4	8.00	14.50
13/16	2.80	5.25	1 13/16	8.40	15.00
27/32	3.10	5.75	1 7/8	8.80	15.50
7/8	3.10	5.75	1 15/16	9.20	16.00
29/32	3.40	6.25	2	9.60	16.50
15/16	3.40	6.25			

128-A is regularly furnished in 64th sizes from 1/8″ to 3/4″; from 25/32″ to 1″ by 32ds and from 1 1/16″ to 2″ by 16ths, at the price of the next larger size.

Reamers for brass or bronze require special clearance and are so furnished on request.

TOOLS FOR TUNING UP

Standard Taper Pin Reamers

Taper ¼-inch per foot

Straight Flute

Carbon Steel—List No. 137 **High Speed Steel—List No. 657**

Spiral Flute

Carbon Steel—List No. 139 **High Speed Steel—List No. 659**

Size No.	Price Each				Diameter at Large End Inches	Diameter at Small End Inches	Length of Flute Inches	Length Over-all Inches
	Carbon Steel No. 137	High Speed No. 657	Carbon Steel No. 139	High Speed No. 659				
7/0	$1.75	$3.50	$2.10	$3.85	.0666	.0497	13/16	1 13/16
6/0	1.60	3.50	1.95	3.85	.0806	.0611	15/16	1 15/16
5/0	1.50	3.25	1.80	3.60	.0966	.0719	1 3/16	2 3/16
4/0	1.50	3.25	1.80	3.60	.1142	.0869	1 5/16	2 5/16
3/0	1.50	3.25	1.80	3.60	.1302	.1029	1 5/16	2 5/16
2/0	1.35	3.00	1.65	3.30	.1462	.1137	1 9/16	2 9/16
0	1.00	2.80	1.20	3.10	.1638	.1287	1 11/16	2 15/16
1	1.00	2.90	1.20	3.20	.1798	.1447	1 11/16	2 15/16
2	1.25	3.00	1.50	3.30	.2008	.1605	1 15/16	3 3/16
3	1.50	3.00	1.80	3.30	.2294	.1813	2 5/16	3 11/16
4	1.75	3.25	2.10	3.60	.2604	.2071	2 9/16	4 1/16
5	2.00	3.50	2.40	3.85	.2994	.2409	2 13/16	4 5/16
6	2.25	4.25	2.70	4.70	.354	.2773	3 11/16	5 7/16
7	2.50	5.25	3.00	5.80	.422	.3297	4 7/16	6 5/16
8	3.00	6.75	3.60	7.45	.505	.3971	5 3/16	7 3/16
9	3.50	8.25	4.20	9.10	.6066	.4805	6 1/16	8 5/16
10	4.50	9.00	5.40	9.90	.7216	.5799	6 13/16	9 5/16

These Reamers are all of the same taper and the point of each Reamer will enter the hole reamed by the next size smaller.

Taper Pin Reamer Set

Straight Flute—List No. 30

This set was especially designed for the automobile kit. It consists of the following sizes of Taper Pin Reamers: 0, 1, 2, 3, 4, 5.

They are put up in a round wooden box, five inches high by two inches in diameter, handsomely finished in dark maroon

Price, Complete, $9.75

Taper Pin Reamer Set

Spiral Flute—List No. 35

Contains sizes 0, 1, 2, 3, 4 and 5 in same size and style box as Set No. 30.

Price, Complete, $11.25

Spirex

TRADE MARK REG. U. S. PAT. OFF.

Machine Taper Pin Reamers

Carbon Steel No. 140 — High Speed Steel No. 650

Spirex Machine Taper Pin Reamers are designed especially for the shop producing pin holes by machine reaming—for which work only reamers of this type can be profitably and economically used.

Due to the special Spirex construction, chips do not tend to pack in the flutes. Hence, breakage is practically eliminated. For this reason, Spirex should, and will, displace all other types of straight and spiral fluted taper pin reamers for machine use.

The very pronounced spiral angle makes it difficult to feed a Spirex Reamer by hand. Nevertheless, it is so free-cutting that, in many cases, it can be so used.

Can be supplied, also, with taper shanks, if desired.

(Taper ¼-inch per foot)

Size No.	Price Each		Diameter at Large End Inches	Diameter at Small End Inches	Length of Flute Inches	Length Over-all Inches
	Carbon Steel	High Speed				
7/0	$2.25	$2.75	.0666	.0497	13/16	1 13/16
6/0	2.00	2.50	.0806	.0611	15/16	1 15/16
5/0	2.00	2.50	.0966	.0719	1 3/16	2 3/16
4/0	2.00	2.50	.1142	.0869	1 5/16	2 5/16
3/0	1.75	2.25	.1302	.1029	1 5/16	2 5/16
2/0	1.75	2.25	.1462	.1137	1 9/16	2 9/16
0	1.75	2.25	.1638	.1287	1 11/16	2 15/16
1	2.00	2.50	.1798	.1447	1 11/16	2 15/16
2	2.25	2.75	.2008	.1605	1 15/16	3 3/16
3	2.50	3.00	.2294	.1813	2 5/16	3 11/16
4	2.75	3.50	.2604	.2071	2 9/16	4 1/16
5	3.00	3.75	.2994	.2409	2 13/16	4 5/16
6	3.50	4.25	.354	.2773	3 1/16	5 7/16
7	4.00	5.00	.422	.3297	4 7/16	6 5/16
8	4.50	5.75	.505	.3971	5 3/16	7 3/16
9	5.00	6.25	.6066	.4805	6 1/16	8 5/16
10	6.00	7.50	.7216	.5799	6 13/16	9 5/16

"Spirex" Reamer with Special Taper

Burring Reamers

With Spiral Flutes

Nos. 232 to 234

Nos. 241 to 244

While designed, and especially ground, for use in a wide variety of materials, Cleveland Burring Reamers are primarily intended for the removal of burrs from cut pipe and conduit. They may be used, also, for smoothing down the rough edges of an extensive range of light materials. Frequently they can be used for countersinking.

Straight Shank List Nos. 232 to 234 are for use in electric drills; while List Nos. 241 to 244 are used in a Brace or Hand Drill.

Carbon Steel

Order by this No.	Price Each	Style of Shank	Capacity Pipe Inches	Diam. Inches	
				At Point	At Large End
232	$1.25	½″ Round	⅛ to 1″	3/16	1 1/4
233	1.50	½″ Round	¼ to 1¼	1/4	1 15/32
234	3.00	½″ Round	¼ to 2	1/4	2 17/64
241	1.00	Bit Brace	⅛ to ½	3/16	47/64
242	1.25	Bit Brace	⅛ to 1	3/16	1 1/4
242½	1.50	Bit Brace	¼ to 1¼	1/4	1 15/32
244	3.00	Bit Brace	¼ to 2	1/4	2 17/64

TOOLS FOR TUNING UP

EZY-OUT

TRADE MARK REG. U.S. PAT. OFF.

Screw Extractors

"The Tools to Use on Broken Screws"

Ezy-Out removes broken cap or set screws with ease. Just drill a hole in the broken screw, insert Ezy-Out, slap on a tap wrench and out comes the broken screw on its own threads. A five-minute job. No re-tapping necessary. Every shop should have a set.

"EZY-OUT" Screw Extractors—List No. 192

Size No.	Diam. at Small End	Diam. at Large End	Length of Flute	Length Overall	List Price Each	Size Drill to Use
1	.054	.117	1/2	2	$0.55	5/64
2	.080	.174	3/4	2 3/8	.60	7/64
3	1/8	1/4	1	2 11/16	.65	5/32
4	3/16	21/64	1 1/8	2 7/8	.75	1/4
5	1/4	7/16	1 1/2	3 3/8	.85	17/64
6	3/8	19/32	1 3/4	3 3/4	1.00	13/32
7	1/2	3/4	2	4 1/8	1.35	17/32
8	3/4	1	2	4 3/8	1.85	13/16
9	1	1 9/32	2 1/4	4 5/8	2.65	1 1/16
10	1 1/4	1 9/16	2 1/2	5	4.00	1 5/16
11	1 1/2	1 7/8	3	5 5/8	5.35	1 9/16
12	1 7/8	2 5/16	3 1/2	6 1/4	6.65	1 15/16

Note:—Always use the largest possible Ezy-Out. For ordinary conditions, we recommend using the size drill shown opposite the Ezy-Out size. Unusual conditions may, however, require the use of a smaller or larger drill, depending upon the length of the broken part or its depth in the hole.

Illustrating the way Ezy-Out backs a broken screw out of its hole on its own threads. First, a hole is drilled in the top of the broken screw; second, an Ezy-Out is inserted in the hole; third, a tap wrench is applied to the Ezy-Out square shank—a left-hand twist, a steady pull, and out she comes!

TOOLS FOR TUNING UP

EZY-OUT
TRADE MARK REG. U.S. PAT. OFF.

Screw Extractors

"The Tools to Use on Broken Screws"

No. 15A Set

No. 15A set includes Ezy-Out Screw Extractors sizes Nos. 1 to 6, inclusive, and was designed especially for garage work.

For general use and around the garage this set will be found invaluable and will handle practically any broken threaded piece in the automobile.

Although we recommend the No. 20 set which contains the proper drills to use with the extractors, to those who do not wish to purchase the drills the No. 15A set will be found most useful and a real time saver.

Price, Complete, with Box, $4.00

No. 20 Set

No. 20 set includes Ezy-Out Screw Extractors sizes Nos. 1 to 6, inclusive, with the proper straight shank drill to use with each extractor.

This is a most complete and convenient set for garage or general use. This set enables you to find the right drill for use with Ezy-Out—the size drill you want, right when you want it.

This set is capable of handling any size bolt, cap or set screw from small electrical parts to one-inch studs.

No. 20 set comes in a varnished case with slide cover and individual compartments for six Ezy-Outs and six drills.

Price, Complete, with Case, $5.00

No. 15 Set

No. 15 Set includes Ezy-Out Screw Extractors sizes Nos. 1 to 5, inclusive, and was designed especially for tool room and lighter repair work.

Although this set does not give the extreme range of the No. 15A and No. 20 sets it will be found of great use for removing the smaller broken cap or set screws, or bolts.

Price, Complete, with Box, $3.00

No. 17 Set

No. 17 set contains Ezy-Out Screw Extractors sizes Nos. 4, 5 and 6 and was designed for general repair shop use.

Although this set does not include small sizes necessary in tool room and garage work it will be found most valuable to take care of the larger cap and set screws found in repair shop work.

This set will handle any size bolt, cap or set screw from $\frac{5}{16}$" up to 1" which, coupled with its low cost, should make a place for itself in any repair shop.

Price, Complete, with Box, $2.35

High Speed Short Set Taper Shank Counterbores and Spot Facers

with Interchangeable Pilots

List No. 878

Diameter Inches	Price Each	Length Overall Inches	Shank Taper	No. of Flutes	Hole Diam. Inches	Range of Pilot Sizes Inches	PILOTS Diam. Inches	PILOTS Price Each
1/4	$3.50	3 13/16	1	3	3/32	1/8 - 3/16	1/8	$.90
9/32	3.50	3 13/16	1	3	3/32	1/8 - 7/32	5/32	.90
5/16	3.50	3 13/16	1	3	3/32	1/8 - 1/4	3/16	.90
11/32	3.70	3 13/16	1	3	3/32	1/8 - 9/32	7/32	1.00
3/8	3.70	4 1/16	1	3	5/32	3/16 - 5/16	1/4	1.00
13/32	3.90	4 1/16	1	3	5/32	3/16 - 11/32	5/16	1.10
7/16	3.90	4 1/16	1	3	5/32	3/16 - 3/8	3/8	1.10
15/32	4.15	4 5/16	1	3	3/16	1/4 - 13/32	7/16	1.25
1/2	4.15	4 5/16	1	3	3/16	1/4 - 7/16	1/2	1.25
17/32	4.40	4 5/16	1	3	3/16	1/4 - 15/32	9/16	1.40
9/16	4.40	4 5/16	1	3	3/16	1/4 - 1/2	5/8	1.40
19/32	4.70	5 1/8	2	3	3/16	1/4 - 17/32	11/16	1.55
5/8	4.70	5 1/8	2	3	3/16	1/4 - 9/16	3/4	1.55
21/32	4.95	5 1/8	2	3	3/16	1/4 - 19/32	13/16	1.70
11/16	4.95	5 1/8	2	3	3/16	1/4 - 5/8	7/8	1.70
23/32	5.20	5 3/8	2	3	1/4	5/16 - 21/32	15/16	1.85
3/4	5.20	5 3/8	2	3	1/4	5/16 - 11/16	1	1.85
25/32	5.45	5 3/8	2	3	1/4	5/16 - 23/32	1 1/16	2.00
13/16	5.45	5 3/8	2	3	1/4	5/16 - 3/4	1 1/8	2.00
7/8	5.70	5 3/8	2	3	1/4	5/16 - 13/16	1 3/16	2.25
15/16	6.00	6 1/8	3	3	1/4	5/16 - 7/8	1 1/4	2.25
1	6.25	6 3/8	3	3	5/16	3/8 - 15/16	1 5/16	2.50
1 1/16	6.50	6 3/8	3	3	5/16	3/8 - 1	1 3/8	2.50
							1 7/16	2.75

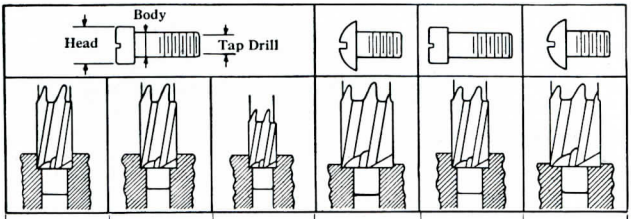
The above counterbores can be furnished in Straight Shank, Short Set; also, in Taper or Straight Shank, Long Set, if desired.

Fraction and decimal sizes of pilots not listed can be furnished at prices of next larger size.

Prices for sizes from 1 1/8″ to 3″, upon application.

When ordering pilots be sure to specify size of counterbore. **This is important.**

Counterbore Sizes for Cap Screws and Machine Screws



	Fillister Head Cap Screw		Fillister Head Cap Screw		Body and Tap Hole for any Screw		Round or Hexagon Head Cap Screw		Fillister Head Machine Screw		Round or Hex. Head Machine Screw		
	Head and Body		Head and Tap Hole				Head and Body		Head and Body		Head and Body		
Size Thread N.F. and N.C.	Cutter for Head	Pilot for Body	Cutter for Head	Pilot for Tap Hole	Cutter for Body	Pilot for Tap Hole	Cutter for Head	Pilot for Body	Cutter for Head	Pilot for Body	Cutter for Head	Pilot for Body	Tap Drills
1/4-28	.375	.250	.375	.213	.250	.213	.500	.250	.437	.250	.500	.250	3
1/4-20	.375	.250	.375	.201	.250	.201	.500	.250	.437	.250	.500	.250	7
5/16-24	.437	.312	.437	.272	.312	.272	.625	.312	.531	.312	.625	.312	I
5/16-18	.437	.312	.437	.257	.312	.257	.625	.312	.531	.312	.625	.312	F
3/8-24	.562	.375	.562	.332	.375	.332	.687	.375	.625	.375	.750	.375	Q
3/8-16	.562	.375	.562	.312	.375	.312	.687	.375	.625	.375	.750	.375	5/16
7/16-20	.625	.437	.625	.390	.437	.390	.813	.437	.718	.437	.875	.437	25/64
7/16-14	.625	.437	.625	.368	.437	.368	.813	.437	.718	.437	.875	.437	U
1/2-20	.750	.500	.750	.453	.500	.453	.875	.500	.843	.500	1.000	.500	29/64
1/2-13	.750	.500	.750	.421	.500	.421	.875	.500	.843	.500	1.000	.500	27/64
9/16-18	.812	.562	.812	.515	.562	.515	1.000	.562					33/64
9/16-12	.812	.562	.812	.484	.562	.484	1.000	.562					31/64
5/8-18	.875	.625	.875	.578	.625	.578	1.062	.625					17/64
5/8-11	.875	.625	.875	.531	.625	.531	1.062	.625					17/32
3/4-16	1.000	.750	1.000	.687	.750	.687	1.312	.750					11/16
3/4-10	1.000	.750	1.000	.656	.750	.656	1.312	.750					21/32
7/8-14	1.125	.875	1.125	.812	.875	.812	1.375	.875					13/16
7/8- 9	1.125	.875	1.125	.765	.875	.765	1.375	.875					49/64
1-14	1.312	1.000	1.312	.937	1.000	.937	1.500	1.000					15/16
1- 8	1.312	1.000	1.312	.875	1.000	.875	1.500	1.000					7/8

All sizes of counterbores and pilots shown on this page can be supplied from stock at regular prices.

Steel Sockets for Taper Shank Tools

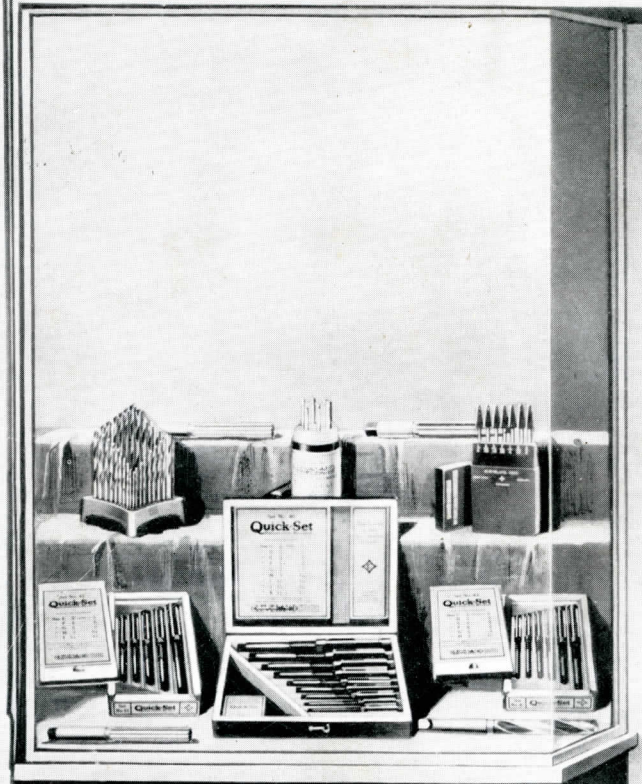
Fitted Sockets—List No. 102

Size No.	Description	Length Overall Inches	Price Each
1 to 2	Has No. 1 Hole and No. 2 Shank	6¾	$2.00
1 to 3	" " 1 " " " 3 "	7½	2.50
1 to 4	" " 1 " " " 4 "	8¾	3.20
1 to 5	" " 1 " " " 5 "	10	4.80
2 to 2	" " 2 " " " 2 "	7½	2.50
2 to 3	" " 2 " " " 3 "	8	2.50
2 to 4	" " 2 " " " 4 "	9¼	3.20
2 to 5	" " 2 " " " 5 "	10¾	4.80
3 to 2	" " 3 " " " 2 "	8¼	3.20
3 to 3	" " 3 " " " 3 "	9	3.20
3 to 4	" " 3 " " " 4 "	10	3.20
3 to 5	" " 3 " " " 5 "	11½	4.80
4 to 3	" " 4 " " " 3 "	10⅝	4.80
4 to 4	" " 4 " " " 4 "	11⅝	4.80
4 to 5	" " 4 " " " 5 "	12½	4.80
4 to 6	" " 4 " " " 6 "	16	12.00
5 to 4	" " 5 " " " 4 "	13⅛	12.00
5 to 5	" " 5 " " " 5 "	14½	12.00
5 to 6	" " 5 " " " 6 "	16	12.00

Sleeve or Shell Sockets—List No. 104

Size No.	Description	Price Each
1 to 2	Has No. 1 Hole and outside fitting No. 2 Socket	$1.80
1 to 3	" " 1 " " " " " 3 "	2.40
1 to 4	" " 1 " " " " " 4 "	3.00
1 to 5	" " 1 " " " " " 5 "	4.40
2 to 3	" " 2 " " " " " 3 "	2.40
2 to 4	" " 2 " " " " " 4 "	3.00
2 to 5	" " 2 " " " " " 5 "	4.40
3 to 4	" " 3 " " " " " 4 "	3.00
3 to 5	" " 3 " " " " " 5 "	4.40
4 to 5	" " 4 " " " " " 5 "	4.40
4 to 6	" " 4 " " " " " 6 "	10.00
5 to 6	" " 5 " " " " " 6 "	10.00

TOOLS FOR TUNING UP



The CLEVELAND TWIST DRILL COMPANY
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